What is claimed is:

1. A method for concentrating a solution in which a solute is dissolved to a solvent, comprising steps of:

generating a solvent gas from said solution in a concentrating tank to concentrate said solution; and

condensing said solvent gas in said concentrating tank to recover as a condensed solvent.

2. A method as claimed in claim 1, wherein said concentrating tank includes a tank main body for containing said solution and a roof disposed on said tank main body, and an inclined inner surface of said roof forms a condensing surface for condensing and recovering said solvent gas.

3. A method as claimed in claim 2, wherein a gutter is attached near a lower end of said roof to said tank main body so as to receive and recover said condensed solvent flowing downwards on said condensing surface.

4. A method as claimed in claim 3, wherein a temperature of said inner surface of said roof is lower than that of said solution in said tank main body.

5. A method as claimed in claim 4, wherein a draining pipe is attached to a bottom of said tank main body for draining said concentrated solution from said concentrating tank.

6. A method as claimed in claim 5, wherein said concentrating tank includes at least one flash nozzle inserted into said tank main body, and said flash nozzle is disposed under a liquid surface of said solution in said concentrating tank so as to

discharge a fresh solution into said solution.

7. A method as claimed in claim 6, further comprising a step of:

preserving a height of said solution surface of said solution in said tank main body to a predetermined value.

8. A method as claimed in claim 7, wherein the temperature of said solution in said tank main body is lower than a boiling point of said solvent.

9. A method as claimed in claim 8, wherein residence time of said solution in said concentrating tank is from 0.5 minute to 20 minutes.

10. A method as claimed in claim 9, wherein said solution is previously filtrated with a primary filtration apparatus, said concentrated solution drained from said concentrating tank is filtrated with a secondary filtration apparatus, a differential rate Rv of filtration amount between said first and secondary filtration apparatus is at most 50%, and said differential rate Rv is calculated from a following formula:

$$Rv\ (\%) = \{(V1-V2)/V1\} \times 100;$$

wherein V1 is mass of said solute in said solution filtrated through a unit size of said primary filtration apparatus, before a first filtration pressure of said solution flowing in said primary filtration apparatus becomes to a first predetermined value, and

wherein V2 is mass of said solute in said concentrated solution filtrated through a unit size of said secondary filtration apparatus, before a second filtration pressure of said

concentrated solution flowing in said secondary filtration apparatus becomes to a second predetermined value.

11. A method as claimed in claim 6, wherein said solute contains polymer.

12. A method as claimed in claim 11, wherein said polymer is cellulose acylate.

13. A method as claimed in claim 11, wherein a polymer concentration of said concentrated solution is from 12 wt.% to 40 wt.%.

14. A method as claimed in claim 13, wherein a polymer concentration of said solution is from 5 wt.% to 30 wt.%.

15. A method as claimed in claim 11, wherein a difference of the polymer concentration between said solution and said concentrated solution is from 1 wt.% to 15 wt.%.

16. A method as claimed in claim 15, wherein viscosity of said concentrated solution is from 1 Pa·*s* to 200 Pa·*s*.

17. A method as claimed in claim 16, wherein viscosity of said solution is from 0.1 Pa·*s* to 100 Pa·*s*.

18. A method as claimed in claim 15, wherein temperature of said concentrated solution is from 20 °*C* to 70 °*C* when said concentration solution is drained from said concentrating tank.

19. A method as claimed in claim 18, wherein temperature of

said solution is from 50 °C to 180 °C when said solution is discharged from said flash nozzle.

20. A method as claimed in claim 15, wherein absolute pressure of gas above said solution surface in said concentrating tank is from 500 hPa to 1100 hPa.

21. A method as claimed in claim 20, wherein when said solution is discharged from said flash nozzle, pressure of said solution is at least saturated vapor pressure at temperature of said solution, and at most 5 MPa higher than the saturated vapor pressure.

22. A method as claimed in claim 15, wherein gas content in said concentrated solution is from 1 mg/L to 200 mg/L.

23. A method as claimed in claim 22, wherein gas content in said solution is from 10 mg/L to 500 mg/L.

24. A method as claimed in claim 15, wherein said concentrated solution is used for producing a polymer film.

25. A method as claimed in claim 24, wherein said polymer film is produced in a co-casting method in which said concentrated solution and other solutions are cast on a band at the same time.

26. A method as claimed in claim 24, wherein said polymer film is produced in a sequentially casting method in which said concentrated solution and other solutions are cast on a band sequentially.

27. A method as claimed in claim 24, wherein said polymer film is cut in a widthwise direction to five film samples having a area of 5 cm^2, and an average number (total number/5) of light point defects having size of at least 20 μm is zero on the film sample, having size of at least 10 μm and less than 20 μm is maximum of 10, and having size of at least 5 μm and less than 10 μm is maximum of 10.

28. A method as claimed in claim 24, wherein said polymer film is used as a protective film for a polarizing filter.

29. A method as claimed in claim 28, wherein said polymer film is used for an optical compensation sheet.

30. A concentrating tank for concentrating a polymer solution, comprising;

a tank main body for temporary containing said polymer solution which is concentrated;

a roof disposed on said tank main body, an inclined inner surface of said roof forming a condensing surface for condensing a solvent gas evaporated from said polymer solution;

at least one flash nozzle inserted into said tank main body, said flash nozzle being disposed under a solution surface of said polymer solution in said tank main body, for discharging a supplied fresh polymer solution into said polymer solution which is concentrated in said tank main body; and

a draining pipe connected to a bottom of said tank main body for draining a concentrated polymer solution.

31. A concentrating tank described in claim 30, wherein an end of said flash nozzle is bent to have an L-shape towards said

bottom of said tank main body, said roof has a corn-like shape, and said tank main body has a bowl-like shape.

32. A concentrating tank described in claim 31, further comprising at an lower end of said roof a gutter for receiving and recovering a condensed solvent flowing downwards on said condensing surface.